The Relevance of Management of Business Process and Orchestration

SYSTEMATIC THOUGHT LEADERSHIP FOR INNOVATIVE BUSINESS

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Executive Vice President – Head of SAP Research

October 22nd, 2009

SAP RESEARCH

THE BEST-RUN BUSINESSES RUN SAP

Agenda

- è **SAP Research**
- è **European ICT Strategy 2020**
- è **Future Internet**

About SAP Research

Objectives

Created 1999 with the mission of talent developing and contribution to SAP's product portfolio…

…. by identifying and shaping emerging IT trends
…. by generating breakthrough technologies through applied research.

- Tapping into the academic brain-pool through campus based research centers
- Largest PhD program for IT in Germany
- Open Innovation model through Co-Innovation
- Participation in EU programs
- Actively engaged in think tanks such as the International Research Forum

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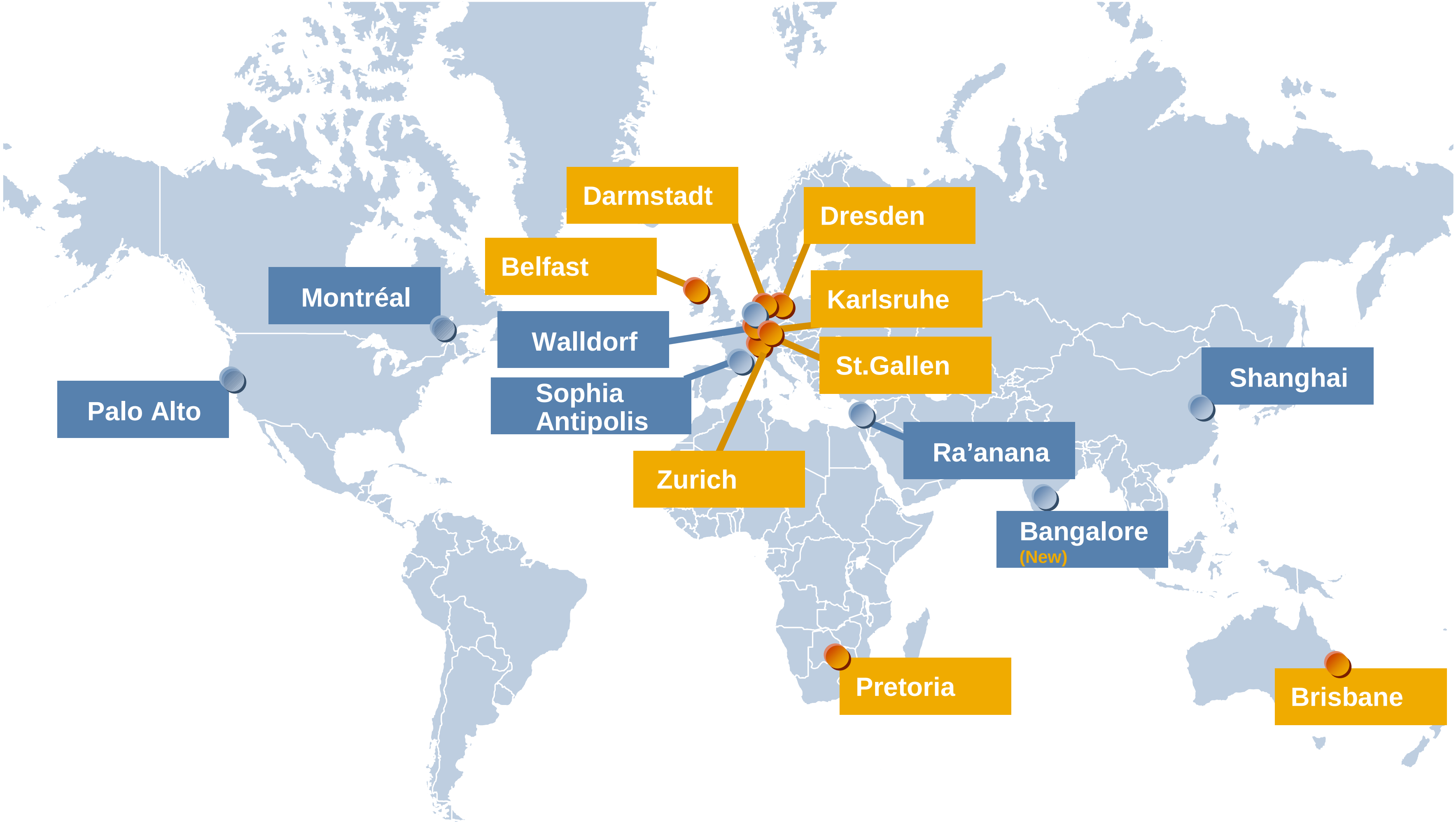
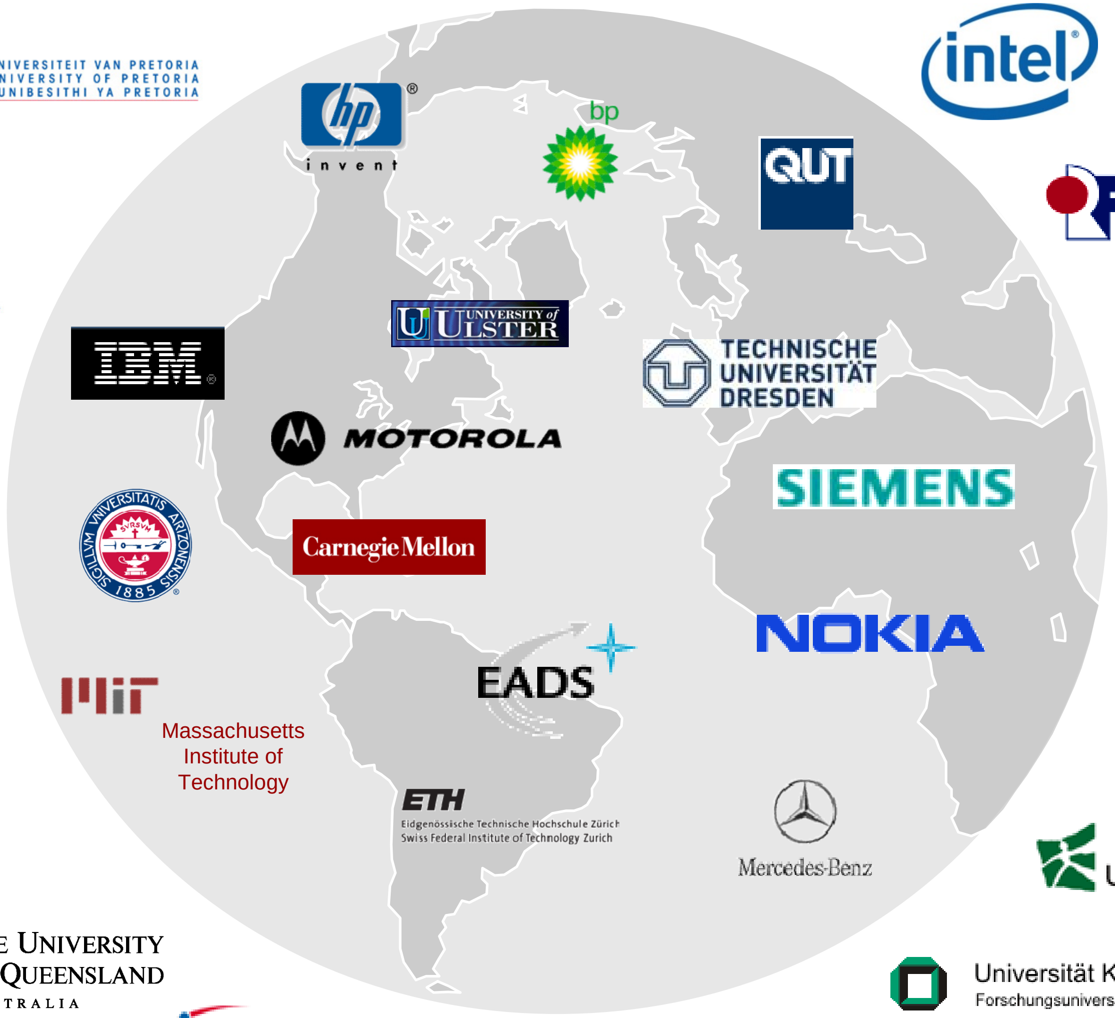
SAP Research Global Network


Darmstadt
Dresden
Belfast
Karlsruhe
Montréal
Walldorf
St.Gallen
Shanghai
Palo Alto
Sophia Antipolis
Ra'anana
Zurich
Bangalore (New)
Pretoria
Brisbane

- 🟦 SAP Lab-based Research Centers
- 🟧 Campus-based Engineering Centers

A selection of Research Partners Around the Globe

SAP



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

hp
invent

bp

intel

QUT

CENTRO
RICERCHE
FIAT

intelleflex.

IBM

UNIVERSITY of ULSTER

TECHNISCHE
UNIVERSITÄT
DRESDEN

HUMBOLDT-UNIVERSITÄT ZU BERLIN

MOTOROLA

SIEMENS

TECHNISCHE
UNIVERSITÄT
DARMSTADT

SIGILLUM UNIVERSITATIS ARIZONENSIS 1885

Carnegie Mellon

meraka
INSTITUTE

NOKIA

EADS

MIT
Massachusetts
Institute of
Technology

Queen's University
Belfast

AKADEMIA EKONOMICZNA W POZNANIU 1926

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

Mercedes-Benz

Universität St.Gallen

THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

Universität Karlsruhe (TH)
Forschungsuniversität • gegründet 1825

infineon

METRO Group

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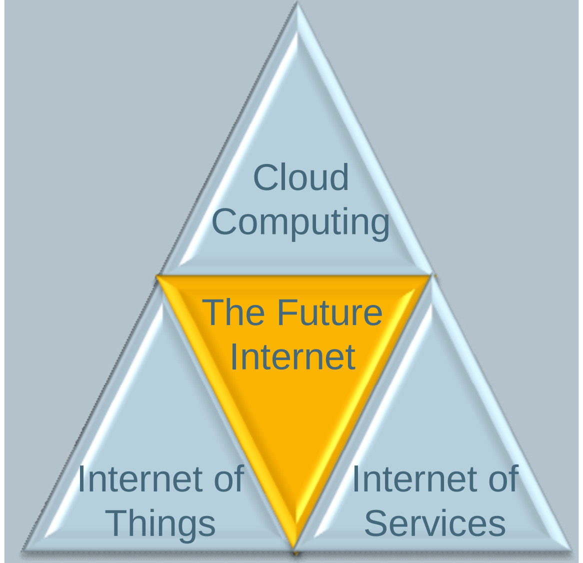
European ICT Strategy - GOALS

Mega Trends of ICT



Cloud Computing

The Future Internet

Internet of Things

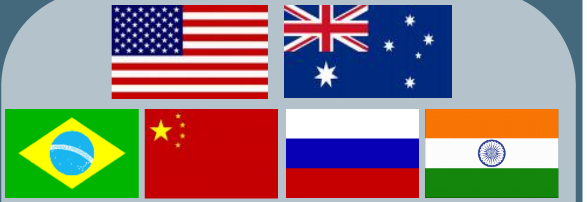
Internet of Services

European ICT Strategy 2020

Sustainable economic recovery to prevent us from future turbulences (as those in 2007).

The increasing competition at a global scale and **the emergence of new business models**, not only fuelled by ICT, but also transforming the ICT sector itself.

Massively available ICT capabilities embedded, connected, ambient, and in the cloud.



International Collaboration

Sustainable collaboration through joint calls

Consultation Workshops & Think Tanks

Agenda

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- è **European ICT strategy 2020**
- è **Future Internet**

Towards the Future of the Internet

SAP

Web-based Service Industry

USA

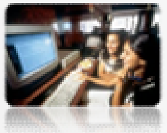
Google eBay iTunes facebook skype amazon.com

Europe

SAP SIEMENS BERTELSMANN media worldwide PHILIPS sense and simplicity T BT

Rest of the world

TRADEXCHANGE Korea e-government Australian Government Centrelink giving you options



Future Internet

Core Business Services

Including:

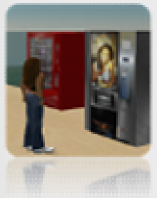
ØIdentity Management ØTrust ØIntegrity ØScaleability

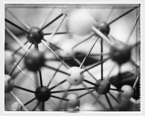
Internet of Services

Global Service Delivery Platform

Core Internet Infrastructure Services

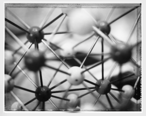
ØAccessibility ØClear Adressability ØTransparent Communication ØReliability





Internet of Things

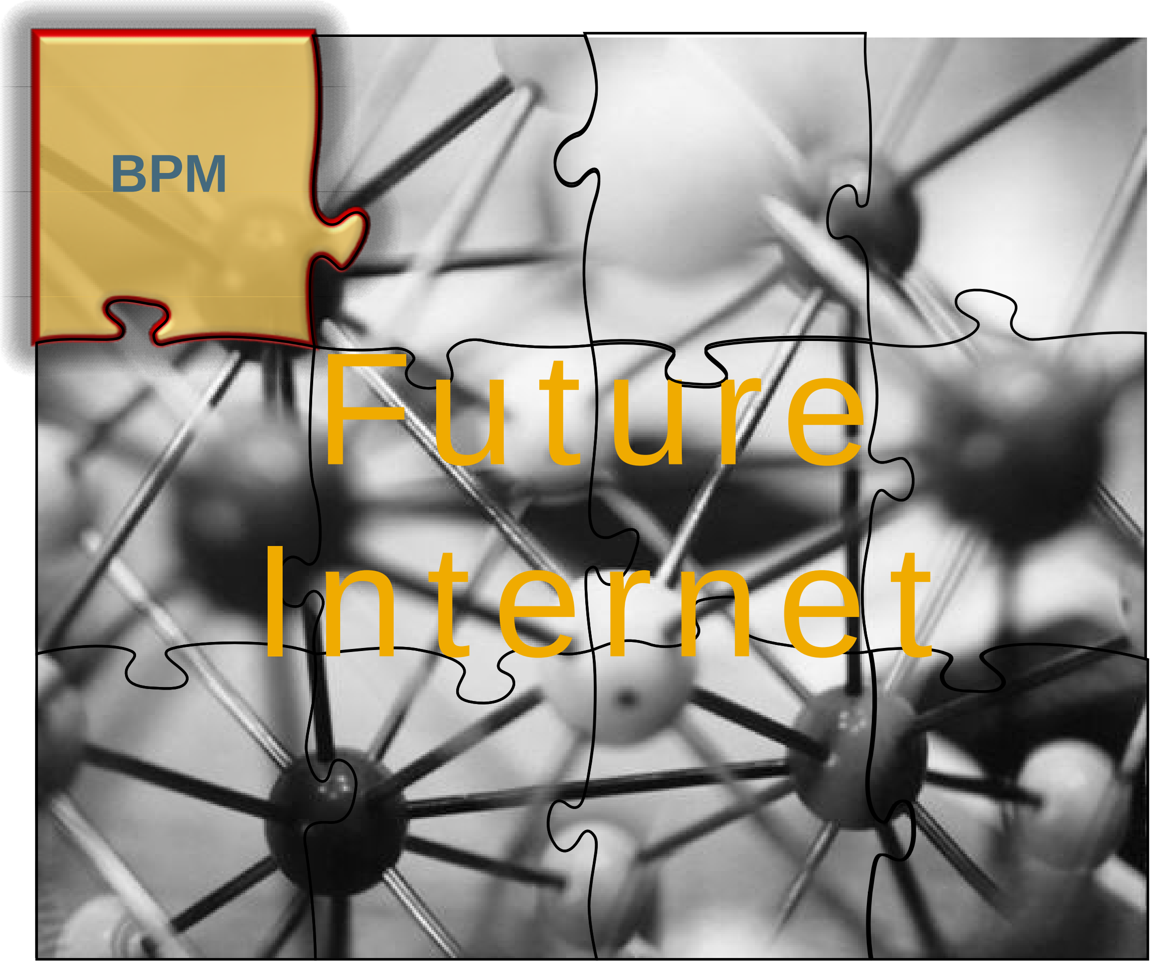
Network Convergence



Future Network Infrastructure

Devices and Components

Future Internet
Business Process Management


BPM
Future
Internet

an emerging
market of
on Demand
BPM solutions

Business Process Management Systems and BPM-enabling Technology Market

Market Size and Growth

- Gartner estimates market size to be 3.6 Bln US$ in 2011
- Highest growth in outsourcing industry with Compound Annual Growth Rate of 10%
- Forrester claims that BPM technologies will be the most frequently implemented and updated technology category in 2009

Business Process Outsourcing Market

Market Size and Growth

- Gartner estimates market size to be 172 Bln US$ in 2009
- Highest growth in outsourcing industry with Compound Annual Growth Rate of 9.1%

Research Vision

Bring BPM into the Cloud

- Low entry cost, quick ROI
- Accounts for shifting buying power in customer base by addressing LOBs

Make BPM Lightweight

- Integrate end users into BPM initiatives
- Overcome cathedral-like BPM community structure

Make BPM Collaborative

- “Processpedia”
- BPM from within an organization not from outside

Make BPM a Commodity

- Simplify BPM
- Find the 10 percent that accounts for 90 percent of all use cases

Research Vision
Bring BPM into the Cloud

- Low entry cost, quick ROI
- Accounts for shifting buying power in customer base by addressing LOBs
- Effectively leverages SAP Research's vision of Internet of Services by
  - Ability to invoke registered and brokered third party services into cloud-based processes
  - Wrap cloud-based processes as services and register them
  - Service providers can utilize service charging facilities
- Easy process integration along supply chains because of common infrastructure
- Connection to enterprise systems behind firewalls through secure data connectors
- Resolution of on premise events through cloud based scalable event hubs

Research Vision
Make BPM Lightweight

- Client technologies need to be end user environments
  - Browsers and applications such as Facebook
  - Existing end user application such as MS Outlook for future ones such as Google Wave
  - Zero installation
- Zero programming and implementation
  - Drag and drop operations
  - Drawing lines, etc
- Distributed and federated execution environments without centralized servers

Research Vision
Make BPM Collaborative

- “Processpedia”

- BPM from within an organization not from outside
  - Currently, highly paid consultants, outside in approaches, acceptance problems, etc
  - Effective end user collaboration mechanisms

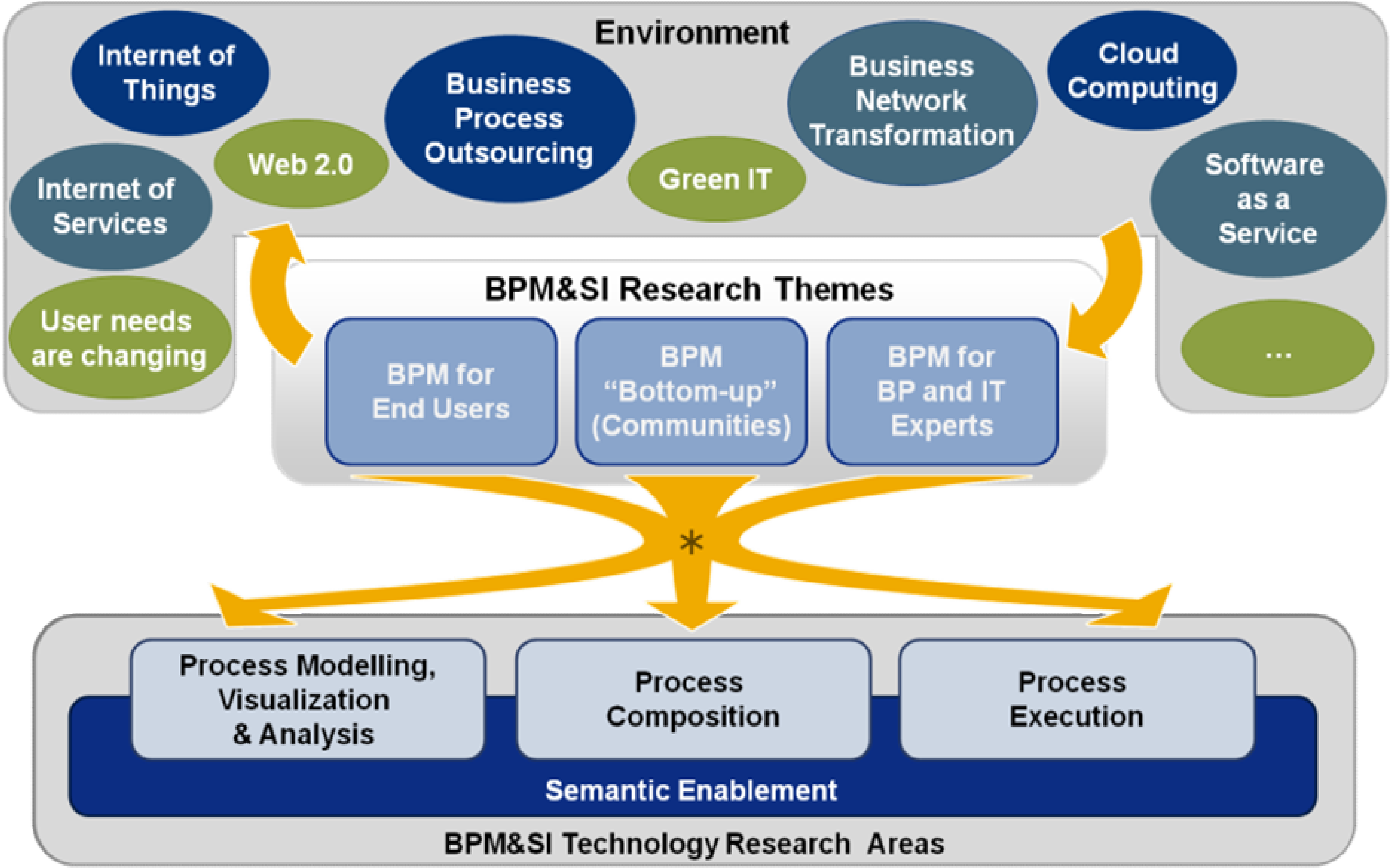
- Collaborate over the entire BPM lifecycle
  - Design: high level view of process, UI design and WebService binding
  - Deployment: on the fly or one click operation through cloud-based infrastructure, blurred borderline between design and deployment
  - Execution: within end user environments, collaborative
  - Analysis: share, collaborate, discuss, collaborative sensemaking to reiterate and redesign the process

- → all in one spot, all collaborative

Research Vision
Make BPM a Commodity

- Simplify BPM
- Find the 10 percent technology that accounts for 90 percent of all use cases
- Commoditize languages
  - Use of BPMN 2.0 (explicitly or under the hood) as a standard with dedicated execution semantics
- Commoditized execution environment
  - Provide app as a gadget to be executed in any end user environment, similar to the Youtube embed URL that allows to invoke a Youtube video within any website or as a gadget within all sorts of applications

BPM&SI – The Big Picture



Environment

Internet of Things

Internet of Services

User needs are changing

Web 2.0

Business Process Outsourcing

Green IT

Business Network Transformation

Cloud Computing

Software as a Service

…

BPM&SI Research Themes

BPM for End Users

BPM "Bottom-up" (Communities)

BPM for BP and IT Experts

*

Process Modelling, Visualization & Analysis

Process Composition

Process Execution

Semantic Enablement

BPM&SI Technology Research Areas

Examples

Integrated cloud-based collaborative end user tool BPM tool suite à Enterprise 2.0 made reality

- “Gravity” for high level collaborative modelling in BPMN
- “Rooftop4BPM” (aka “Skyline”) for collaborative app development
- “Slipstream” for real-time end user process analysis
- “Yowie” for smooth process execution without tool breaks

From a theoretical model to a live environment

Major Changes in Business Process Management

- From process analysis and process design to executive-oriented process management
- Factors - process scenarios - challenges - resolution methods
- Portals, BPM, and SOA are growing together

The Technology Implemented:

Innovative Business Process Management with a subject-oriented, methodical approach (S-BPM) and LIVE PROGRAMMING in the operating department

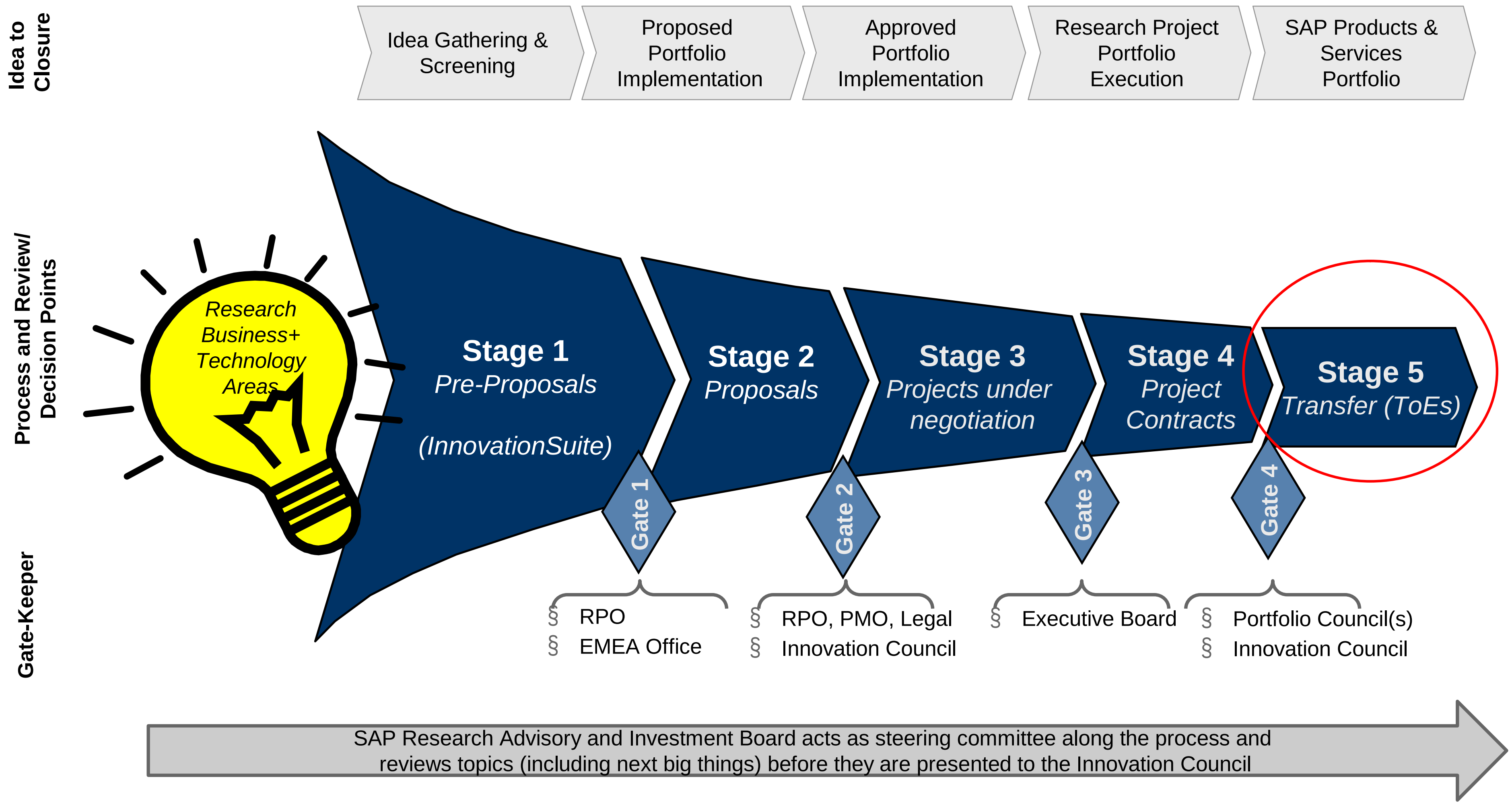
- Modeling – validation and immediate execution Portals

The Solution:

SAP Research is analyzing S-BPM in the context of Transfer Projects processes:

application, staffing, and approval of complex research projects

SAP Research core process



Idea to Closure

Idea Gathering & Screening

Proposed Portfolio Implementation

Approved Portfolio Implementation

Research Project Portfolio Execution

SAP Products & Services Portfolio

Process and Review/ Decision Points

Research Business+ Technology Areas

Stage 1
Pre-Proposals

(InnovationSuite)

Stage 2
Proposals

Stage 3
Projects under negotiation

Stage 4
Project Contracts

Stage 5
Transfer (ToEs)

Gate 1

Gate 2

Gate 3

Gate 4

Gate-Keeper

§ RPO
§ EMEA Office

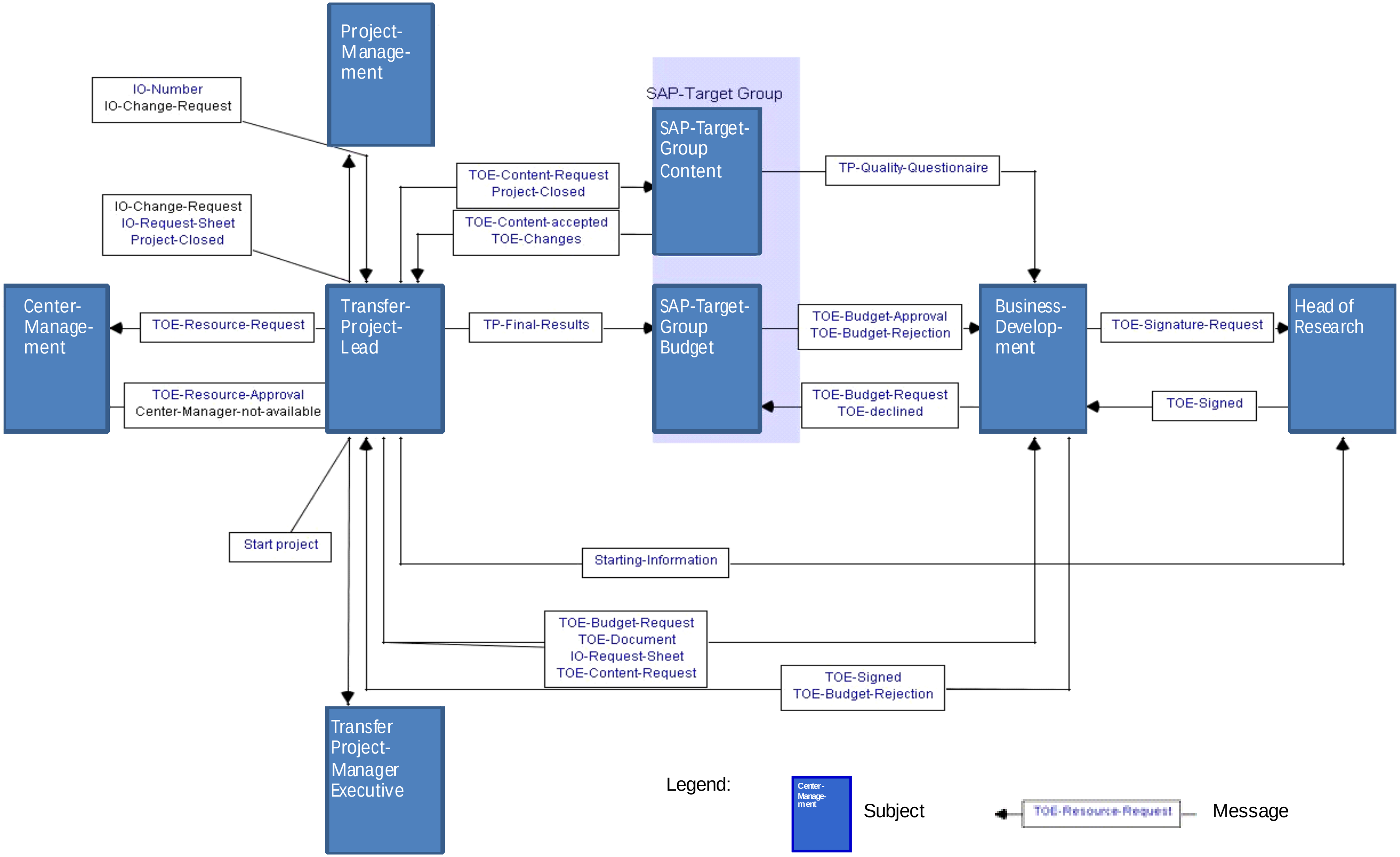
§ RPO, PMO, Legal
§ Innovation Council

§ Executive Board

§ Portfolio Council(s)
§ Innovation Council

SAP Research Advisory and Investment Board acts as steering committee along the process and reviews topics (including next big things) before they are presented to the Innovation Council

Subjectinteracting diagram of the SAP Research Transfer Project process



Project-Management

IO-Number
IO-Change-Request

SAP-Target Group

SAP-Target-Group Content

TOE-Content-Request
Project-Closed

TOE-Content-accepted
TOE-Changes

TP-Quality-Questionaire

IO-Change-Request
IO-Request-Sheet
Project-Closed

Center-Management

TOE-Resource-Request

Transfer-Project-Lead

TP-Final-Results

SAP-Target-Group Budget

TOE-Budget-Approval
TOE-Budget-Rejection

Business-Development

TOE-Signature-Request

Head of Research

TOE-Resource-Approval
Center-Manager-not-available

TOE-Budget-Request
TOE-declined

TOE-Signed

Start project

Starting-Information

TOE-Budget-Request
TOE-Document
IO-Request-Sheet
TOE-Content-Request

TOE-Signed
TOE-Budget-Rejection

Transfer Project-Manager Executive

Legend:

Center-Manage-ment

Subject

TOE-Resource-Request

Message

Homepage jFlow webapplication

Findings

- ✓ More efficient process modeling due to subject orientation
  è main process could be created in one day
- ✓ More transparency in open project requests for project managers and controlling
- ✓ Better overview of state of all projects
- ✓ Fewer manual actions è word document not necessary anymore
  è email is generated instead
- ✓ More efficient process flow due to integrated, computer-based workflow
- ✓ Faster process flow

Thank you!

QUESTIONS – COMMENTS – DISCUSSION

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